

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-30 (Canceled).

31. (Currently Amended) A ~~low-profile~~ low-profile monopole antenna structure having a linear polarization, comprising:

a first metallic patch and a second metallic patch stacked over a ground plane, the first patch comprising a circumference along a patch edge of the first patch, the second patch comprising a circumference along a patch edge of the second patch, the first patch being arranged between the ground plane and the second patch, the first patch being grounded at at least a first zero potential area by electrical connection with the ground plane and a second zero potential area by electrical connection with the ground plane and being fed at a single feed area, the second patch being electrically interconnected to the first patch, and the first patch comprises at least a first aperture and a second aperture located completely within the circumference of the first patch to thereby force current, propagating from the feed area to the first zero potential area and the second zero potential area, toward the patch edge of the first patch to thereby enable radiation from slots defined by the edge of the first patch and the edge of the second patch and the ground plane.

32. (Currently Amended) A linearly-polarized, ~~low-profile~~ low-profile, monopole antenna structure, comprising:

a first metallic patch and a second metallic patch stacked over the first patch, the patches being intended to be mounted over a ground plane, the first patch comprising a circumference along a patch edge of the first patch, the second patch comprising a circumference along a patch edge of the second patch, the first patch being arranged between the ground plane and the second patch, the first patch comprising a first zero potential area by connection with the ground plane and a second zero potential area by connection with the ground plane, the second patch being electrically interconnected to the first patch, and the linearly-polarized monopole antenna being fed at a single feed area comprised on the first patch, and the first patch comprises at least a first aperture and a second aperture located completely within the circumference of the first patch to thereby force current, propagating from the feed area to the first zero potential area and the second zero potential area, toward the patch edge of the first patch to thereby enable radiation from slots defined by the edge of the first patch and the edge of the second patch and the ground plane.

33. (Previously Presented) The antenna structure according to claim 32, wherein the first aperture and the second aperture are located on the first patch in such a way that current propagating from the feed area to the first zero potential area propagates in two different paths around the first aperture and that current propagating from the feed area to the second zero potential area propagates in two different paths around the second aperture.

34. (Previously Presented) The antenna structure according to claim 32, wherein the first aperture is located between the feed area and the first zero potential area, and in that the second aperture is located between the feed area and the second zero potential area.

35. (Previously Presented) The antenna structure according to claim 32, wherein the second patch is electrically interconnected to the first patch at at least the first zero potential area and the second zero potential area.

36. (Previously Presented) The antenna structure according to claim 32, wherein the first aperture and the second aperture each have an extension which is substantially perpendicular to a line between the first zero potential area and the second zero potential area.

37. (Previously Presented) The antenna structure according to claim 32, wherein there is a symmetry of the first patch about a line between the first zero potential area and the second zero potential area.

38. (Previously Presented) The antenna structure according to claim 32, wherein there is a symmetry of the first patch about a line perpendicular to a line between the first zero potential area and the second zero potential area.

39. (Previously Presented) The antenna structure according to claim 32, wherein the second patch comprises no openings within its circumference.

40. (Previously Presented) The antenna structure according to claim 32, wherein the second patch comprises at least one opening within its circumference.

41. (Previously Presented) The antenna structure according to claim 32, wherein the second patch is electrically split into two halves along a line which is substantially perpendicular to a line between the first zero potential area and the second zero potential area.

42. (Previously Presented) The antenna structure according to claim 32, wherein the second patch at least covers the first aperture and the second aperture of the first patch.

43. (Previously Presented) The antenna structure according to claim 32, wherein the first patch comprises further apertures.

44. (Previously Presented) The antenna structure according to claim 32, wherein the first patch and the second patch are substantially of the same size.

45. (Previously Presented) The antenna structure according to claim 32, wherein the first patch, in addition to the first aperture and the second aperture, comprises further apertures.

46. (Previously Presented) The antenna structure according to claim 32, wherein the antenna structure comprises the ground plane.

47. (Previously Presented) The antenna structure according to claim 46, wherein the ground plane is substantially of the same size as the first patch and the second patch.

48. (Previously Presented) The antenna structure according to claim 32, wherein the electrical connections from the first patch to the ground plane and the electrical interconnections between the first patch and the second patch, in addition to providing the

antenna structure with electrical connections also provides the antenna with mechanical support giving the antenna a self supporting structure.

49. (Previously Presented) The antenna structure according to claim 32, wherein the first patch is supported by a first dielectric and in that the second patch is supported by a second dielectric, the first dielectric and the second dielectric further providing the antenna with mechanical support giving the antenna a self supporting structure.

50. (Previously Presented) The antenna structure according to claim 46, wherein the first patch is supported by a first dielectric and in that the second patch is between the first dielectric and a second dielectric and in that the ground plane is supported by the second dielectric, the first dielectric and the second dielectric further providing the antenna with mechanical support giving the antenna a self supporting structure.

51. (Previously Presented) The antenna structure according to claim 32, wherein the single feed area is probe fed at one point.

52. (Previously Presented) The antenna structure according to claim 51, wherein the single feed area further comprises inductive feed matching.

53. (Previously Presented) The antenna structure according to claim 32, wherein the single feed area is probe fed at a plurality of points.

54. (Previously Presented) The antenna structure according to claim 53, wherein the plurality of points are placed in the feed area along a limited line that if extended would pass through the first zero potential area and the second zero potential area.

55. (Previously Presented) The antenna structure according to claim 53, wherein the plurality of points are placed in the feed area symmetrically about a line that passes through the first zero potential area and the second zero potential area.

56. (Previously Presented) The antenna structure according to claim 32, wherein the single feed area is fed by an aperture coupling.

57. (Previously Presented) A device comprising wireless communication means, wherein the device comprises an antenna according to claim 31.

58. (Previously Presented) A wireless mobile terminal, wherein the terminal comprises an antenna according to claim 31 for wireless communication.

59. (Previously Presented) A personal computer card suitable for insertion into an electronic device, wherein the card comprises an antenna according to claim 31.

60. (Previously Presented) A wireless local area network system comprising a base station and a plurality of terminals which are in wireless communication with the base station, wherein at least one terminal comprises either directly or indirectly an antenna according to claim 31.

61. (New) The antenna structure in claim 31, wherein the current propagating from the feed area moves in essentially one direction toward the patch edge.

62. (New) The antenna structure in claim 32, wherein the current propagating from the feed area moves in essentially one direction toward the patch edge.